Early Journal Content on JSTOR, Free to Anyone in the World

This article is one of nearly 500,000 scholarly works digitized and made freely available to everyone in the world by JSTOR.

Known as the Early Journal Content, this set of works include research articles, news, letters, and other writings published in more than 200 of the oldest leading academic journals. The works date from the mid-seventeenth to the early twentieth centuries.

We encourage people to read and share the Early Journal Content openly and to tell others that this resource exists. People may post this content online or redistribute in any way for non-commercial purposes.

Read more about Early Journal Content at http://about.jstor.org/participate-jstor/individuals/early-journal-content.

JSTOR is a digital library of academic journals, books, and primary source objects. JSTOR helps people discover, use, and build upon a wide range of content through a powerful research and teaching platform, and preserves this content for future generations. JSTOR is part of ITHAKA, a not-for-profit organization that also includes Ithaka S+R and Portico. For more information about JSTOR, please contact support@jstor.org.

No.	1900.0			Observed Range in Photographic Magnitudes.
No. 1[1]	$\alpha = 0^h55^m14^s$	$\delta = +60°$	11'.0	13 to fainter than 17.5
2[2]	5 22 8	−28	51 .2	9 to 12.5
3[3]	6 33 8	+ 9	5. 0	13 to fainter than 17.5
4[4]	6 34 7	+ 8	56 .3	16 to 17.5
5[5]	6 34 11	+ 8	56 .8	15.5 to 17
6[6]	6 35 35	+10	32 .1	13 to 15
7[7]	6 41 40	+ 8	7 .3	10 to 15
8[8]	18 23 45	−11	15 .1	12.5 to 14.5
9[9]	19 56 55	+22	50 .0	11 to 14
10[10]	21 33 6	+23	22 .7	12 to 17
11[11]	23 46 59	+55	29 .4	13.5 to 16. (Algol)
12[12]	23 47 35	+56	11 .2	13 to fainter than 18

EDWIN P. HUBBLE.

PHOTOMETRIC PARALLAXES OF NINE CEPHEID VARIABLES

The parallaxes and space co-ordinates of 139 Cepheid variables of the galactic system were published two years ago in *Mt. Wilson Contr.*, No. 153. Further photometric studies, mainly by Hoffmeister at Bamberg, make it now possible to add nine stars to the list. The periods, as usual, are known with much higher accuracy than the magnitudes at maximum and minimum, but unless the error in the median brightness exceeds half a magnitude, the mean error of the parallax is probably less than 25 per cent, that is, on the average less than 0."0002.

Designation	Galactic		Period in Days	Med. Mag. Visual	Parallax	Distance (Unit is 100 Parsecs)		
	Long.	Lat.				Radial	Projected	From Plane
140 X Arietis...	137°	−40°	0.651	8.9	0".0014	7.1	5.5	− 4.6
141 SS Tauri....	148	−38	0.370	12.2	0 .00032	31.2	24.6	−19.3
142 SW Tauri...	158	−29	1.584	9.4	0 .00083	12.0	10.5	− 5.8
143 RZ Tauri...	147	−18	0.172	10.0	0 .00083	12.0	11.4	− 3.7
144 —Aurigae ..	134	+ 1	18.356	9.2	0 .00022	45.5	45.5	+ 0.8
145 ST Tauri...	161	− 7	4.035	8.6	0 .00083	12.0	11.9	− 1.5
146 RW Cancri..	164	+43	0.548	11.0	0 .00052	19.2	14.0	+13.1
147 V Leon. min.	166	+58	0.544	10.7	0 .00060	16.7	8.9	+14.2
148 W Serpentis.	296	+57	17.113	10.3	0 .00014	71.	39.	+60.

---

[1] 4 observations.

[2] C. D. − 28°.2169. Position from C. D. catalog. 3 observations.

[3] 30 observations. Period is about 9 months. Light curve is steeper on ascending side than on the descending side.

[4] and [5] 30 observations. Period is short or irregular.

[6] $6^s.2$ following, 113" south of B. D. +10°.1221. 25 observations. Period is long.

[7] $14^s.1$ preceding, 82" south of B. D. +8°.1496. 25 observations. Period is long.

[8] 9 observations. Period is long. Position estimated from the B. D. Chart.

[9] 23 observations. Period is long.

[10] 3 observations.

[11] Algol type. Faint on June 7, 1915, and February 27, 1916, hour unknown. $9^s.5$ following, 7 '0" north of B. D. +55°.3036.

[12] 40 observations. Period about 12 months.

The median absolute magnitude can be computed from the parallax and apparent magnitude, or read from the period-luminosity curve (*Mt. Wilson Contr.* 151). The anomalous position in space of W *Serpentis* has been discussed in a preceding note. A few points relating to the other stars of the list may be worth mentioning.

1. The period of SW *Tauri* is very uncommon, coming between the values typical for the long and short period groups of Cepheids. Its galactic position suggests affiliation with the short period group.

2. The period of RZ *Tauri*, four hours and eight minutes, is the shortest on record for a cluster type variable with the single exception of XX *Cygni*, period three hours and fourteen minutes.

3. The two long period Cepheids, 144—*Aurigae* and ST *Tauri*, show the concentration to the galactic plane characteristic for such stars, W *Virginis* being the only conspicuous exception. Similarly, the five variables of the short-period group illustrate the wide distribution in galactic latitude and in distance from the galactic plane that is usual for short-period Cepheids.

HARLOW SHAPLEY.

CHANGES IN THE SPECTRUM OF OMICRON CETI.

Observations of the spectrum of *Omicron Ceti*, made during the period of its decline in brightness from the maximum of the summer of 1919, show that the changes which occurred up to the middle of December are such as are well known from previous investigations. As the star grows fainter the banded character of the spectrum becomes more pronounced, especially in the region $\lambda 4400$-4600; the relative intensity of the hydrogen lines changes, $H\gamma$ becoming stronger with reference to $H\delta$; $\lambda 4227$ of calcium and the chromium lines $\lambda 4255$ and $\lambda 4275$ become broader and stronger, and many other low temperature lines increase in prominence; finally a number of narrow bright lines develop, most of which may be identified with low temperature lines of various elements, more especially of iron. The magnesium line at $\lambda 4571$ becomes much the strongest of these lines by the time the star has decreased considerably in light. A spectrogram taken on December 12 shows these characteristics plainly, the hydrogen lines, like the bright low-temperature lines, being narrow and well-defined.